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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/762,951	01/21/2004	Chee Keong Chong	70030732-1	5978

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AGILENT TECHNOLOGIES, INC.
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EXAMINER	
MONBLEAU, DAVIENNE N	
ART UNIT	PAPER NUMBER
2878	

DATE MAILED: 08/23/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No. 10/762,951	Applicant(s) CHONG ET AL.	
	Examiner Davienne Monbleau	Art Unit 2878	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 21 January 2004.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-19 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-19 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 30 August 2004 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Drawings

The drawings were received on 8/30/04. These drawings are accepted.

Specification

The title of the invention is not descriptive. A new title is required that is clearly indicative of the invention to which the claims are directed; Examiner suggests using a title that more accurately describes the type of regions on the encoder disk.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1-4, 9, 10, 11, 13, and 14 are rejected under 35 U.S.C. 102(b) as being anticipated by Nakajima et al. (U.S. 5,428,217).

Regarding Claim 1, *Nakajima* discloses in Figure 21 an optical encoder disk comprising a disk (1001), a first region (1101) on said disk (1001), wherein said first region (1101) increases continuously in size in a radial direction from a minimum at a first angular position to a maximum that is 360 degrees from said first angular position, and a second region on said disk (1001) adjacent to said first region (1101) wherein one said first and second regions allows a greater amount of light to be transmitted therethrough than the other of said first and second regions.

Regarding Claim 10, *Nakajima* discloses in Figures 20 and 21 an optical encoder comprising a light source (1003), a light-sensitive detector (1006), and a code disk (1001) positioned between said light source (1003) and said detector (1006), said code disk (1001) comprising a first region (1101) and a second region adjacent to said first region (1101), wherein said first region (1101) increases continuously in size in proportion to angular disk position over a 360-degree arc, wherein one of said first and second regions allows light to be transmitted to said detector (1006) and the other of said first and second regions prevents light from being transmitted to said detector (1006), and wherein movement of said encoder disk (1001) relative to said detector (1006) exposes a different amount of said detector (1006) to light.

Regarding Claims 2 and 11, *Nakajima* discloses in Figure 21 that the second region encompasses said first region (1101).

Regarding Claims 3 and 13, *Nakajima* discloses in Figure 21 a circular-shaped third region encompassed by said first region (1101), wherein one of said first and third regions allows a greater amount of light to be transmitted therethrough than the other of said first and third regions.

Regarding Claims 4 and 14, *Nakajima* discloses in Figure 21 a ring-shaped fourth region (1001) encompassing said second region, wherein one of said second and fourth regions allows a greater amount of light to be transmitted therethrough than the other of said second and fourth regions.

Regarding Claim 9, *Nakajima* discloses in Figure 20 that light (source 1003) transmitted through said disk (1001) is received at a light-sensitive device (1006), wherein said light-

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sensitive device (1006) generates an output corresponding to an amount of said light transmitted through said disk (1001).

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

Claims 5-8, 12, and 15-19 are rejected under 35 U.S.C. 103(a) as being unpatentable over Nagajima.

Regarding Claims 5-8 and 15-18, *Nagajima* teaches in Figure 21 an encoder disk with a plurality of regions, but does not teach a fifth, sixth, and seventh region. It would have been obvious, however, to one of ordinary skill in the art at the time of the invention to use additional code regions in *Nagajima* to improve the precision and accuracy of the position detection. Furthermore, it would have been obvious to one of ordinary skill in the art at the time of the

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invention to choose particular relative structural relationship between the plurality of regions in increase the number of distinct measurements, thus improving the precision and accuracy of the position detection.

Regarding Claim 12, *Nagajima* teaches in Figure 20 an electronic circuit (1007) coupled to said detector (1006), said electronic circuit (1007) converting an output of said detector (1006) into a signal. *Nagajima* does not teach that said signal is digital. It would have been obvious, however, to one of ordinary skill in the art at the time of the invention to convert the signal into a digital signal to use a particular type of user interface that requires digital readings.

Regarding Claim 19, *Nagajima* teaches in Figures 3 and 29 an optical encoder disk comprising a plurality of photodetectors, wherein one photodetector corresponds to each circular pattern.

Conclusion

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure because they teach various configurations of optical encoder disks with a plurality of regions and photodetectors.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Davienne Monbleau whose telephone number is 571-272-1945. The examiner can normally be reached on Mon-Fri 9:00 am to 5:00 pm.


If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Dave Porta can be reached on 571-272-2444. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Danielle Monbleau

DNM


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